METHODS OF MAKING BEVERAGES WITH ENHANCED FLAVORS AND AROMAS

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of and claims the benefit under 35 U.S.C. §120 of U.S. application Ser. No. 12/170,396 filed Jul. 9, 2008, now U.S. Pat. No. 8,043,645, which is hereby incorporated in its entirety by reference.

BACKGROUND

1. Field

The present embodiments generally relate to beverages with enhanced qualities such as flavor and aroma and method of making same.

2. Description of the Related Art

Many beverages have a distinct taste and aroma that is difficult to duplicate in a more convenient form. One example of such a beverage is coffee. With regular coffee, water is boiled in a coffee pot in advance, and ground roasted coffee beans are put directly in contact with boiling water (the standard amount is 10 g of ground roasted coffee beans per 100 ml of boiling water) and are boiled in boiling water to effect extraction or are similarly extracted by using a percolator or the like. The obtained extract contains caffeine, tannic acid, saccharides, fats, proteins and various aromatic components and it has a fragrance inherent to coffee and a peculiar complicated flavor inclusive of a bitter taste, an astringent taste and an acid taste.

When roasted coffee beans are ground and then allowed to stand in air, they are readily oxidized which degrades the fragrance and flavors, and when tepid water is used for extraction, the contact time for extraction of roasted coffee beans is usually prolonged. Furthermore, if the boiling time is too long or the extract is allowed to stand for a long time, the fragrance and flavor are degraded. Accordingly, even in case of regular coffee, the method of making coffee is difficult, and it is very difficult to obtain coffee rich in flavor and fragrance.

Coffee extract concentrates and coffee extract powders have heretofore been manufactured on an industrial scale, and instant coffee beverages which can instantly be drunk by dissolving them in hot water or cold water have been prepared and marketed. Ordinarily, these instant coffee beverages are prepared according to a process comprising charging ground roasted coffee beans in an extraction tank, extracting the beans with hot water or boiling water, and subjecting the extract to drying treatments such as spray drying, vacuum drying or freeze drying. Instant coffee beverages prepared according to such conventional processes contain components which cannot ordinarily be drunk, though the amounts of these components differ to some extent according to the extraction conditions like the extraction temperature and time, the concentration conditions and the drying conditions.

Many aromas and flavors associated with coffee are very delicate and complex. With conventional soluble coffee, the delicate coffee flavors and aromas are often degraded or lost during processing and manufacturing methods. Coffee aroma is known to be very unstable. As coffee aroma degrades, it generates unpleasant and non-coffee-like notes that are undesirable. This degradation substantially reduces the perceived quality of the product. For this reason, special attention must be paid to the preparation and storage of flavoring components such as coffee aroma so that desirable aroma components are enhanced or undesirable components are reduced or eliminated.

Furthermore, since the extract is exposed to high temperatures for a relatively long period of time during the preparation, the flavor and fragrance are degraded by cooking, evaporation and oxidative decomposition of aromatic components, and the delicate aroma inherent to coffee is lost. The conventional product usually comes to have an excessive scorching taste. In short, the obtained beverage is far from regular coffee in both the flavor and fragrance. The soluble coffee of the present embodiments overcome these problems in the prior art as well as provide additional advantages.

SUMMARY

Some embodiments relate to a soluble coffee product, comprising: a dry coffee extract component; and a pulverized coffee component, wherein the pulverized coffee component has not been extracted, and wherein the pulverized coffee component is added to the dry coffee extract component after the dry coffee extract is dried.

In some embodiments, the pulverized coffee component is added to the dry coffee extract component both before and after the dry coffee extract is dried.

In some embodiments, the dry coffee extract component comprises from about 70% to about 90% of the soluble coffee product and, wherein the ground coffee component comprises from about 10% to about 30% of the soluble coffee product.

In some embodiments, the dry coffee extract component comprises from about 70% to about 99.9% of the soluble coffee product and, wherein the ground coffee component comprises from about 0.1% to about 30% of the soluble coffee product.

In some embodiments, the pulverized coffee component has a mean particle size of about 350 microns or less. In some embodiments, the pulverized coffee component has a median particle size of about 350 microns or less.

Some embodiments further comprise an additive selected from the group consisting of coffee oils, non-coffee oils, non-coffee aromas, and coffee aromas.

Some embodiments further comprise at least one selected from the group consisting of coffee extract, concentrated coffee, dried coffee, coffee oils, coffee aromas (distillates), flavor powders, flavor oils, spices, ground or pulverized cocoa beans, ground or pulverized vanilla beans, vitamins, antioxidants, nutraceuticals, dietary fiber, an omega-3 oil, an omega-6 oil, an omega-9 oil, a flavonoid, lycopene, selenium, a beta-carotene, resveratrol, a vegetable extract, a dry green coffee extract, a wet green coffee extract and an herbal extract.

Some embodiments relate to a method of making a soluble coffee product, comprising: pulverizing coffee beans to form a first pulverized coffee product, grinding or pulverizing coffee beans to form a second ground or pulverized coffee product, extracting the second ground or pulverized coffee product to form an extracted coffee product, combining the first pulverized coffee product with the extracted coffee product to form a first coffee blend, drying the first coffee blend to form a first dried coffee blend, combining the first pulverized coffee product with the first dried coffee blend to form the soluble coffee product.

In some embodiments, the coffee is pre-frozen before being pulverized.

In some embodiments, the coffee is not pre-frozen before being pulverized, further comprising the step of refrigerating the grinding and pulverizing machinery.